16. (Amended)   The set of instructions of claim 13 wherein said regular expression has a format ^\d{10}$.Z where ^\d{10}$ represents a string of ten numbers, and Z represents a geographically oriented top-level domain.

17. (Amended)   The set of instructions of claim 13 wherein said regular expression has a format ^[0-9]+$.Z where ^[0-9]+$ represents a string of numbers, and Z represents a geographically oriented top-level domain.

Marked versions of these claims are attached.

REMARKS

Claims 1-17 remain pending. Claims 1, 5-10, and 14-17 have been amended. Applicant wishes to thank Examiners Nguyen and Thompson for granting an interview on January 23, 2003 to discuss the rejection of the claims (in particular claim 1) in view of the Farber and Schneider references. In that interview, Applicants described the presently claimed invention, the operation of the Farber and Schneider references, and the applicability of these references to the claimed invention.

Claim Rejections Under 35 U.S.C. § 112, Second Paragraph

Claims 5-8 and 14-17 were rejected under 35 U.S.C. § 112, second paragraph as failing to distinctly claim the invention. In particular, the Office Action objects to the expression "^\d{10}$" and "^[0-9]+$" in each of these claims. In response, claims 5-8 and 14-17 have been amended by defining each of these expressions in the same manner as they are described in the

specification (see, e.g., page 6 of the specification). No new matter has been entered with this amendment. In view of the amendment to the claims, reconsideration and withdrawal of the rejection of claims 5-8 and 14-17 under 35 U.S.C. § 112, second paragraph is respectfully requested.

Claim Rejections Under 35 U.S.C. §§ 102(e) and 103(a)

Claims 1-3, 9, and 10-12 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,185,598 to Farber et al. ("Farber"). Claims 4-8 and 13-17 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Farber in view of U.S. Patent No. 6,338,082 to Schneider ("Schneider"). In discussing the Farber and Schneider references, Applicant is making no admission that either reference has a filing date that predates the present invention.

In view of the interview with the Examiner, the pending independent claims (claims 1, 9 and 10) and have been amended to refer to performing a regular expression comparison at a Domain Name Server in accordance with embodiments of the present invention. As shown below, neither the Farber nor Schneider references teach or suggest the methods and apparatus recited in these claims.

Farber refers to a system for handling resource requests made by clients in a network. As shown in Col. 7 and 8 (as well as Col. 22, lines 37-63), a client computer generates a resource identifier that is sent to a Domain Name Server to look up the network address corresponding to the identifier. The client computer then generate a GET request that includes a requested resource. It is this GET request that is analyzed using a regular expression comparison. It is noted, however, that this comparison is done at reflector 108 (Fig. 1) and not at a Domain Name Server. Also, the GET request does not include an Internet site name (e.g. www.generic.com),

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but only the paths to be accessed in the computer system associated with the network address returned by the DNS earlier.

Schneider fails to make up for the deficiencies of Farber. Schneider, which refers to requesting network resources over the Internet, refers to the arrangement of DNS servers to resolve URL identifiers. As mentioned at Col. 3, lines 4-38 and Col. 9, lines 45-56, these servers are typically UNIX-based servers that may be arranged in a hierarchical, distributed manner. The comparisons performed in the Domain Name Servers of Schneider do not use regular expression comparisons.

Farber and Schneider, taken singularly or in combination, fail to teach or suggest performing regular expression comparisons with an Internet site name to identify an IP address for multiple similar site names. Moreover, there is no suggestion in the current Internet network or domain-name registration systems to perform regular expression comparison in a DNS.

A good overview of the DNS system may be found in Chapter 1 of DNS and BIND by Paul Albitz & Cricket Liu (ISBN 1-56592-512-2). DNS lookups are performed in a hierarchical fashion. There are 13 well-known domain name servers distributed throughout the world. They are named A.ROOT-SERVERS.NET through M.ROOT-SERVERS.NET. All requests begin with one of these name servers. These name servers reply with the list of name servers to handle top level domains (TLDs). These TLDs are the commonly known ones like com, edu, gov, mil, and net along with the two character country codes and the newer ones like biz and info. The TLDs are controlled by a government-sponsored organization known as ICANN and the root name servers are managed by Network Solutions (now Verisign). Because these TLDs are so closely controlled, the root name servers would never have a need to use a regular expression search.

The second level domain names, like ibm.com, cisco.com, uspto.gov were originally licensed to users by Network Solutions. To increase competition, Network Solutions was required to split into two logical organizations, the registry and the registrar. The registry would maintain all of the .com, .edu, and .net name servers and would charge a relatively low fee for each name to the registrar. This permitted additional registrars like register.com and godaddy.com to compete for registration fees. Since the registrars are being paid on a per name per year basis, they have no incentive to provide an easy mechanism for claiming a large number of names with a single entry. Therefore, they would never have a financial incentive, in fact they have a financial disincentive, to use a regular expression search.

In view of the above, reconsideration and withdrawal of the rejection of claims 1-17 under 35 U.S.C. §§ 102(e) and 103(a) is respectfully requested.

CONCLUSION

For all the above reasons, the Applicant respectfully submits that this application is in condition for allowance. A Notice of Allowance is earnestly solicited.
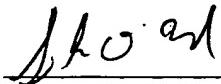
The Examiner is invited to contact the undersigned at (202) 220-4255 to discuss any matter concerning this application. The Office is hereby authorized to charge any additional fees or credit any overpayments under 37 C.F.R. § 1.16 or § 1.17 to Deposit Account No. 11-0600.

Respectfully submitted,

KENYON & KENYON

Dated: January 31, 2003   By: Shawn W. O'Dowd (Reg. No. 34,687)

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Marked up copy of the amended claims:

Please amend the claims as follows:

1. (Amended) A method of processing an Internet site name comprising:

retrieving a regular expression stored at a Domain Name Server; and

performing a [regular expression] comparison between a first Internet site name and the regular expression [a character pattern] at [a] the Domain Name Server to identify an Internet Protocol address for multiple similar site names.

5. (Amended) The method of claim 4 wherein said regular expression has a format $^\wedge\backslash d\{10\}\$.X.Y$ where $^\wedge\backslash d\{10\}\$$ represents a string of ten numbers, X represents a sub-level domain and Y represents a top-level domain.

6. (Amended) The method of claim 4 wherein said regular expression has a format $^\wedge[0\text{-}9]+\$.X.Y$ where $^\wedge[0\text{-}9]+\$$ represents a string of numbers, X represents a sub-level domain and Y represents a top-level domain.

7. (Amended) The method of claim 4 wherein said regular expression has a format $^\wedge\backslash d\{10\}\$.Z$ where $^\wedge\backslash d\{10\}\$$ represents a string of ten numbers, and Z represents a geographically oriented top-level domain.

8. (Amended) The method of claim 4 wherein said regular expression has a

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format ^[0-9]+$.Z where ^[0-9]+$ represents a string of numbers, and Z represents a geographically oriented top-level domain.

9. (Amended) An apparatus for processing an Internet site name comprising:

a Domain Name Server adapted to [perform] retrieve a regular expression stored therein and perform a comparison between a first Internet site name and [a character pattern] the regular expression to identify an Internet Protocol address for multiple similar site names.

10. (Amended)   A set of instructions residing in a storage medium, said set of instructions capable of being executed by a processor to implement a method of processing an Internet site name, the method comprising:

retrieving a regular expression stored at a Domain Name Server; and

performing a [regular expression] comparison between a first Internet site name and the regular expression [a character pattern] at [a] the Domain Name Server to identify an Internet Protocol address for multiple similar site names.

14. (Amended)   The set of instructions of claim 13 wherein said regular expression has a format ^\d{10}$.X.Y where ^\d{10}$ represents a string of ten numbers, X represents a sub-level domain and Y represents a top-level domain.

15. (Amended)   The set of instructions of claim 13 wherein said regular expression has a format ^[0-9]+$.X.Y where ^[0-9]+$ represents a string of numbers, X represents a sub-level domain and Y represents a top-level domain.

16. (Amended)   The set of instructions of claim 13 wherein said regular expression has a format ^\d{10}$.Z where ^\d{10}$ represents a string of ten numbers, and Z represents a geographically oriented top-level domain.

17. (Amended)   The set of instructions of claim 13 wherein said regular expression has a format ^[0-9]+$.Z where ^[0-9]+$ represents a string of numbers, and Z represents a geographically oriented top-level domain.